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ORIGINAL ARTICLES.

EIGHT PRIMARY MOVEMENTS OF THE NORMAL SPINE AS A BASIS FOR GYMNASTICS IN THE TREATMENT OF SCOLIOSIS AND ALLIED CONDITIONS.—A PRELIMINARY REPORT.*

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The successful treatment of scoliosis and allied conditions of the spine is attended with many difficulties, among which may be mentioned the chronicity of the condition, the marked deformity when the case is (usually) seen for the first time, the rigidity of the spine and its related parts, the great length of time required by the treatment, the work necessary on the part of the patient, and the multiplicity of exercises necessary to prevent the monotony that is sure to follow the continual performance of the few heretofore prescribed.‡ The age, habits, temperament, etc., of the patient are also important factors in the prognosis and treatment, but far less essentially so than those first mentioned.

The combined method of treatment, viz:—by exercises and apparatus—is the one most favored and most frequently employed by orthopedic surgeons at the present day. It has for its aim the prevention of further increase of the deformity and, at the same time, the development of the atrophied and weakened muscles and the increasing of the flexibility of the spine. By a systematic course of treatment, is secured the muscular development necessary to maintain correction when once secured and to the proper performance of the more powerful positional exercises that are designed to overcome the deformity, and increase the mobility and flexibility, and, at the same time, carry to a higher degree the muscular development begun by the first and simpler movements. In a given case requiring exercises, it is easy to say to the physician, "give exercises and restore the function of the spine and you effect a cure." He may readily grasp the principle of treatment, but as these exercises must be given

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‡Text-books usually direct from twenty to thirty exercises to obtain a cure.

through a long period of time (varying from one to three or four years), the problem of multiplying them becomes of the utmost importance. This is especially true of the physician who has not made an extensive study of the deformities of the spine or who seldom has to do with such cases. For guidance he turns to any authority upon the subject and finds thirty or forty or more exercises given as being indicated in scoliosis and similar conditions, and with these he begins the treatment. This supply is soon exhausted and he is at a loss how to proceed further. He finds that he must either cease treating the case, or repeat the same exercises over and over, and then the patient tires because of the monotony of their use. The continued repetition has grown irksome and the improvement is so slow that interest in the work is soon lost and further treatment is suspended. One rarely sees a patient who will perform the same movements three times a day for a year or so; but with properly selected gymnastics and many of them, persistence is easily maintained and a cure of the deformity is the reward of both patient and physician.

The employment of these exercises has always been a matter of empiricism, one writer quoting those given by another, and perhaps adding a few of his own, but laying down no rational basis or system by which further treatment is governed. A physician may secure sufficient for a given case, if he be of fertile resources, or have a number of text-books, but reproduction of these becomes more or less a matter of memory when he has another similar case to deal with, which makes the process burdensome as well as very irrational. Tubby, of London, whose work on *Deformities* is the most recent contribution to orthopedic surgery, divides scoliotic patients into two classes, "those in whom muscular weakness is pronounced," and "those in whom muscular development is fair," and gives about twelve or fifteen exercises for the treatment of each class; yet he furnishes no directions for further gymnastics. This is the same method as is adopted by all writers on the subject and the treatment of such deformities has, in this particular, remained at a standstill. Some statistician has collected over four thousand exercises without gymnastic apparatus, which are applicable to the treatment of scoliosis, but to remember one-eighth of this number would not only burden the memory, but also would be unnecessary when the different forms can be so easily systematized and rendered available for use.

After I had formulated the plan herein embodied and had almost completed the preparation of this report, I found that Noble Smith (Curvatures of the Spine, 2d Ed., p. 14), had recorded very concisely the movements of the normal spine as follows: "The spinal column can be moved anteriorly, posteriorly, or laterally; or these movements may be combined in circumduction. The whole spine can also be rotated upon its own axis;" and with this declaration he dismisses the subject and directs exercises in the treatment of spinal curvatures empirically, enumerating one form after another to be used in certain cases and conditions. He apparently did not recognize the fact that the cure of these cases demanded the restoration of the normal function and consequently the employment of these natural movements for that purpose. With the following eight movements as a basis, a rational system of exercises can be formed, and for purpose of demonstration, I will again enumerate them.

1. Bending forward.
2. Bending backward.
3. Bending to the right.
4. Bending to the left.
5. Combining these movements in circumduction to the right.
6. Combining these movements in circumduction to the left.
7. Rotation of the spine upon its vertical axis to the right.
8. Rotation of the spine upon its vertical axis to the left.

This description of the movements of the normal spine is in accord with that of anatomists, who describe the normal motions of joints as flexion, extension, adduction, abduction, circumduction, and rotation, and while these terms do not cover all the motions of which a joint is or may be capable, yet all others are, perforce, modifications of these primary

forms, and it is this conception of the spinal capabilities that is of so great assistance in multiplying and directing new and proper gymnastics for the treatment of these most obstinate conditions. Even as direction in space is referred to the four cardinal points of the compass, so all spinal movements may be classified under these eight simple forms, and all belong to or are modifications of bending, twisting, or circumduction.

In all cases of scoliosis or allied spinal deformities, there is more or less rigidity of the spine present, due not to an inflammatory or other pathologic condition of the bony or muscular structures, but to the muscular debility, inactivity and atrophy, and to the long-continued assumption of the mal-posture. With this rigidity, there is also limitation of motion in one or more directions. The exact amount of such rigidity and limited motion can be ascertained by having the patient perform these primary movements and noting the degree of flexibility of the spine in each. The guide to the gymnastic treatment is thus obtained, and exercises that will increase the motion in the desired direction can be prescribed. Since all movements, then, are limited to eight cardinal forms, it is evident that variety must be had by change of position, and in many cases, if not in all, this is the most important part of the treatment, as, by this means, total correction of the deformity in some cases and partial correction in all cases, may be obtained. While, therefore, certain attitudes are indicated in certain cases, they are directly contra-indicated in others; hence the importance of this part of the treatment.

The relations that the arms and legs bear to the spine are of course most important as altering the contour of that part. For instance, raise or extend an arm and note the curving of the spine toward that side. The same obtains in the case of the legs, because of the tilting of the pelvis upon changing the relative length of the legs by lifting or moving one of them in any direction. A lumbar curve may be obliterated by this action, or a dorsal curve by the proper placing of the arms; and by the combination of these two, the "key-note" positions, or those in which the greatest amount of correction obtains, are assumed, and a better result is obtained in the treatment.

What positions, then, may be used for the purpose of multiplying exercises? All those that to a greater or less extent obliterate the existing deformity, such as lying prone or supine upon the floor or table, sitting on the floor, on a chair or on a stool, with the legs in various positions, or one hip raised; standing with feet together, feet separated, one advanced or retracted, standing on one foot, using the rings, trapeze, or bars, kneeling on both knees or on one knee, squatting, and so on, without number. But in all these positions, the spine can be moved only in the eight primary ways.

In this short paper I do not discuss the mechanism of these motions and positions and their importance as altering the deformity and restoring the function of the spine, as these will be considered at length in a more or less elaborate study of this subject, to be published later. In bringing this subject before you, I do not wish to be understood as originating a new form of treatment for scoliosis and other similar spinal conditions; but the object may be briefly stated as:

1. To remove the employment of exercises from the realms of empiricism, where it has so long held sway.

2. To place it upon a scientific and rational basis.

3. To make this basis so simple that every physician can readily grasp the underlying principles.

4. To place within every physician's reach a complete system with which to rationally meet the requirements of each and every case.

5. To make it possible for the physician to personally direct the forms of exercises when it may be deemed expedient to refer the patient to a masseur.

THE VOMITING OF APPENDICITIS—

The *Revúe Internationale de Médecine et de Chirurgie* credits Pick with this formula;

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Menthol	8 gr.
Cognac	1½ oz.
Laudanum	5 drachms.

M. Sig. Take from ten to twenty drops several times a day in a little sweetened water.

REPORT OF WORK WITH ROENTGEN RAYS AT THE POLYCLINIC HOSPITAL.*

MAX J. STERN, M.D.†

It is my purpose to demonstrate by means of photographic plates and prints some of the results attained during the last six or eight months in the Roentgen ray laboratory of the Philadelphia Polyclinic. I am impelled to do this, rather than present a paper dealing with the physical side of the subject, in the belief that to the surgeon and the general practitioner the greatest amout of interest still attaches in this new field to the tangible results that can be pictorially reproduced and with certainty demonstrated. While the present paper will of course deal with generalities only, it is my hope that I may, from time to time, present such accurate detailed knowledge as I shall have gained from my almost constant labor in this new diagnostic field.

I shall briefly recount the technic pursued in obtaining the pictures which I shall present. The various procedures are carried out in a large, airy, darkened room. The light is excluded not because of any effect it may have on the photographic plate or that the chemic changes induced on it by the X-rays are in any way interfered with, but because the amount and color of the light in the tubes can be the better observed, and the retina, accustomed to the surrounding darkness, is much more sensitive to an appreciation of the value of an image on the fluorescent screen. The deeper the green light in a tube and the greater its coincident intensity the more X-rays are being given off. When the light approaches a yellow color the visual or fluoroscopic picture is usually better, but the radiographic effect poorer.

The electric energy is derived from a chlorid accumulator storage-battery of the series known as "Type 5 E." This has been by far the most satisfactory of all the various kinds of batteries I have tried. The Ruhmkorff coil is one with an eight-inch spark and the regulation spring-vibrator. I have not employed the brake-wheel. The Crookes' tubes I am at present using are the new three-electrode tubes devised by Prof. Stein of the Chicago University and made for me by Messrs. Queen & Co. They have proved the most satisfactory so far employed. Their distinguishing feature is that when the vacuum in the tube becomes high, as it almost always does after a long exposure, it can be sufficiently reduced to make the tube again available by a change in the polarity of the electrodes and a reversal in the direction of the electric current in the tube. The stand for the tube and all wires employed are insulated as perfectly as possible, to reduce the electric leakage to a minimum.

The patient or subject to be exposed to the rays is placed in a position most favorable for either visual observation or an exposure to a plate, as the case may be. This is only too often a matter of much study and frequent experimentation. Thus, if it is desired to obtain an antero-posterior radiograph of the knee-joint for instance, the natural conclusion would be to lay the subject on his back. place a plate under the posterior aspect of the joint, and the tube above the patella and make the necessary exposure. True, a very acceptable picture of the joint can be obtained in this way, yet when compared with one taken in the reverse position, i.e., with the sensitized side of the plate in contact with the anterior surface of the limb and the tube excited against the popliteal aspect, it will be found that the exposure can be reduced almost, if not quite, one-half, and the resulting picture be infinitely sharper and hence more beautiful in its contrasts. What has been said of the knee-joint is practically applicable to almost every other portion of the human body. It can be

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readily understood then, that, at times, when long exposures in apparently awkward positions are necessary, much ingenuity must be exercised to place the subject in such position that the enforced quietude shall not become to irksome. For this purpose a bed, tables, racks, bed-rests, various-shaped chairs, splints, pillows, bandages and assistants must be at hand, or the operator will meet with obstacles that appear insurmountable.

The sensitive plate I now invariably use is X-ray plate specially prepared by Mr. John Carbutt of this city. It is by far the most rapid and most generally satisfactory of all the plates I have employed, and I have tried all the more rapid ones, and a number of the slower of those most commonly employed by American photographers. The ordinary plate that I have found to approach most nearly the specially prepared X-ray plate is the Carbutt B. 16. I am firmly convinced that the best plate has not yet been produced and our plate-makers must devote their attention to the evolvement of one that shall respond much more rapidly to the X-rays than do those at present employed. My belief is that some fluorescent material may be embodied in the emulsion that by its absorption of, or agitation by, the rays will greatly enhance the activity of the chemic change in the silver-salts employed. The plates as furnished at pre-ent by Mr. Carbutt are packed separately, first in black needle-paper, then in a black envelop and finally in an outer sealed one of yellow post-office paper. This packing renders them light-tight and with ordinary care will prevent fogging.

The remaining necessity for obtaining a successful picture is the fluoroscope. This is a box shaped like a truncated pyramid. The inner surface of the base is coated with afluorescent material, in this country almost invariably of calcium tungstate; abroad, apparently always barium platinum cyanid. The upper end is open and lined with a furry material. When the observer's eyes are placed within this aperture the box becomes light-tight. At present I shall only consider the fluoroscope in its relation to obtaining a successful radiograph. When a fluorescing screen or fluoroscope is directed to an excited Crookes' tube, its base or sensitized surface becomes luminous. The fluorescence can be compared to the impression received in looking from a darkened room through a sheet of ground glass into light beyond. An object interposed between the tube and the screen, will, if sufficiently impervious to the rays, give a shadow-picture. The more impervious the substance to the X-rays, or the greater the mass of the same substance, the darker will be the resulting shadow. For this reason our pictures show sharp values in substances of different densities or more delicate ones in tissues of the same character but of greatly varying thickness.

We measure the activity of our tube, or the amount of X-rays that is being given off, by the brilliancy of the fluorescence of the calcium-salt and the sharpness of definition and detail shown in the shadow-picture of an interposed body, which for convenience is usually the hand or arm of the operator. In general terms, the more active the tube (by this I mean the volume of X-rays that is being given off) the shorter the exposure. This time is fixed by the operator and is entirely dependent on his judgment, which is formed from the relative value of the picture presented on the screen. In other words we use a fluoroscope as a sensitometer.

Having briefly detailed the necessary apparatus I shall review the succeeding steps followed in obtaining a picture. Most subjects seem to be timid about submitting to the essential exposure, probably because the method has not been sufficiently employed to make the procedure familiar to the general community; but unless they are exceedingly stupid, particularly refractory or intoxicated, little or no difficulty is experienced in removing all dread of evil consequences. In children, however, the task of preventing movement, and, not infrequently, violent struggling is often a most difficult one, for one cannot reason their fear away, and the noise of the vibrator, the electric sparking and the general gloom of the darkened room, frequently arouse their worst fears, more particularly if they have been the subject of some painful injury. A little diplomacy, a coin or confection

will, however, often produce astonishing results. After the exposure has begun and proceeded for some little time, the subject soon quiets down, a feeling of languor follows, and not infrequently, sleep. I shall have occasion again to refer to this effect.

The part to be portrayed always contains a bony portion, which lies nearer to one surface than another. I am, of course, considering only the human frame. Now this is an axiom: the closer the contact between the sensitized plate and bone, the shorter the exposure and the less the distortion and the sharper the resulting picture. Whether injury to bone is sought to be portrayed, or a foreign body to be located, the law remains unchanged. In the latter instance the nearest bony prominence that can with accuracy be demonstrated must serve as the landmark from which measurements must be directed and calculations made. Failure to grasp this point has led to frequent and trying disappointments. It is but an illustration of how essential is an anatomic knowledge even in successful skiagraphy. The best picture will always be obtained with the plate in contact with that surface of the body which is nearest the underlying bone that is sought to be most sharply portrayed in the skiagraph.

The position of the tube in relation to the part is largely a matter of experience. The tendency of all operators at the beginning of their career, is, I presume, to have the tube in too close contact with the subject. This has several unfortunate results. For one thing, the picture will always be distorted, and lack sharpness of definition. Should a light be gradually moved from an object, a point will be reached where the shadow will give an image, fairly reproducing the body of the original, and showing sharp lines. This point would be the proper one at which to place the tube. To prevent burning, however, is the more important reason why the Crookes' tube should be at a sufficient distance from the patient. We know that a portion of the body may, with safety, be exposed to the diffuse rays of the sun, yet, should some of these rays be collected by means of even a mild convex glass and directed to the same part, the result would be a burn, the degree and severity of which will depend upon the duration of the exposure and the amount of surface involved. I believe the X-rays produce such an effect when the tube is held too close to the body. There is an area about the center of the field of activity of a Crookes' tube which is very much more powerful than any toward the periphery.

All those cases of so-called sloughing reported in the newspapers are, I believe, nothing more or less than burns of the first and second degree, produced by long exposures with the tube placed in improper relation with the part to be skiographed.

The necessary exposure will be shorter (1) as the spark-gap is larger up to a certain point, probably about ten or twelve inches; (2) the more nearly the vacuum of the tube is at that point of exhaustion at which the coil employed will give off the greatest amount of X-rays; (3) the nearer the tube to the proper focal point; (4) the less the density and volume of the tissue in the part to be portrayed; (5) the more sensitive the plate.

The exposures of the body vary from that of a finger or toe, which requires the least time, to that of a hip joint, which requires most. With the coil I employ I have obtained very beautiful pictures of the hand and forearm in two minutes, but it requires at least an hour to get even a fair representation of the hip-joint of a well-developed adult.

The development of the plate and its subsequent treatment admit of wide latitude and are matters I shall not at present discuss. The printing, however, must be considered briefly. In the first place, almost all highly glazed papers will give better results with X-ray plates than will mat surface-papers. More or less of the detail will be lost in the latter; yet for exhibition purposes, they are better, as the reflection of light from their surface is less, and they can be more readily seen by a large assemblage. Any of the good albumin or collodion papers of glossy surface will be found best for X-ray work. Much of the beauty of a finished picture is due to the treatment of the plate, after it is placed in the sun to print, and those desiring to acquire a knowledge of this branch of

X-ray work should first serve an apprenticeship in a photographic gallery, as I did. Frequently certain parts must be printed out and others restrained, depending entirely upon the part of the picture it is desired to emphasize.

There is another subject that I desire to discuss briefly, the incidental effects of an exposure. In regard to the former I may say that in an ordinary exposure of a limb in a person not of an excitable temperament little or no change can be detected in the vascular or nervous system. If, however, the tube be directed over the thorax of even one who has frequently been exposed and has neither dread nor other cause to suffer reflex excitation of the cardiac centers, a decided acceleration and change in the character of the heart-beat can be detected. The rise in an assistant of mine amounted to as much as fifteen beats in the minute. The change in the character of the beat can also be detected in sphygmographic tracings, as was shown in the case of a patient suffering from a large thoracic aneurism who had been exposed a number of times and in whom no cause for excitement existed.

FURTHER INVESTIGATION OF EUCAIN HYDROCHLORATE AS A LOCAL ANESTHETIC.

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Since the recent report made on eucain hydrochlorate,[1] further observations have been conducted upon many new cases in which eucain was used as the means of inducing local surgical anesthesia. All who have tried eucain, and all who have seen its anesthetic effect agree with the following statement which we made in the former article: "Eucain is a valuable addition to our resources. It is rapid in action, safe, produces positive and prolonged anesthesia, causes no serious after-effects, and can be rendered aseptic by boiling. It is the best local anesthetic before the profession."

In the nose, throat and eye, eucain has given great satisfaction, and operations upon these parts can be performed without a particle of pain. In operating upon these regions solutions similar in strength to those of cocain may be employed but we use a much greater amount of solution of eucain than of solution of cocain. There is not much difference as regards the rapidity, intensity and duration of the anesthesia caused by each of these agents. The greatest difference between cocain and eucain, is that eucain can be administered in large doses without danger, while corresponding doses of cocain would put the patient in deadly peril. Cocain in the hands of not a few, given in very small doses has caused marked symptoms of poisoning.

A paper was read at the session of the Hufelandsche Gesellschaft, Berlin, April 16, 1896, by Dr. Gaetans Vinci. of Messina, (*Duetsche Medicinische Zeitung*, No. 34, April 27, 1896,) who says there are some important differences between cocain and eucain. In the first place eucain is less poisonous than cocain. Whilst the animals treated with eucain survived, other animals injected with the same doses of cocain died. The pulse with eucain is always decreased in frequency; with cocain there is a primary acceleration. As regards their local action, the time for complete anesthesia and its duration, there is no difference between the two substances.

Prominent dentists both in Germany and France speak highly of eucain as a safe and reliable agent. H. Kiesel Zahnarztliche Rundschau, Berlin, April 5, 1896,) says he has known of eucain since November, 1895, and has used it extensively in dentistry. His results have been so satisfactory with this drug that he has cast aside ethyl chlorid and

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1University Medical Magazine, Nov. 1896.

ethyl bromid. He claims as much as 2 garms (30 grains) can be injected without trouble and says half that quantity would, however, under favorable circumstances be sufficient to painlessly extract all the teeth. Dr. C. L. Schleich of Berlin, the originator of the infiltration-method of anesthesia thinks there is not the slightest doubt that eucain is just as efficacious as cocain in causing anesthesia of the mucous membranes. He has used it in twenty cases and has not met with a single case of poisoning. Experiments made upon his own person showed that the anesthesia of the wheals was complete. He says it should replace cocain. American surgeons, dentists and ophthalmologists are rapidly familiarizing themselves with the advantages of this drug.

The following cases will demonstrate the value of eucain hydrochlorate for inducing local anesthesia without producing systemic effects, not only in minor surgical operations, but also in operations of considerable magnitude.

Case I. Male; operator, the writer. Diagnosis—traumatic gangrene of the little finger. Operation—amputation at the metacarpo-phalangeal joint by the racket method. The wound was closed with eight sutures. Duration of the operation was ten minutes and the amount of eucain used was two drachms of a five-per cent. solution hypodermatically. The patient when asked afterwards in regard to the pain of the operation replied: "It hurt a little but I suffered much more before the operation than during it."

Case II. Male; operator, the writer. Diagnosis — small melanotic sarcoma just above the elbow. Operation—excision, the would was closed with three sutures. One drachm of a five-per cent. solution of eucain injected around and beneath the growth permitted a painless operation.

Case III. Male; operator, the writer. Diagnosis — large sebaceous tumor of the neck. Operation — removal and insertion of seven sutures. The operation lasted fifteen minutes and was painless throughout. The amount of eucain was two drachms of a five-per cent. solution used hypodermatically.

Case IV. Male; operator, the writer. Diagnosis—ingrowing nail on the big toe accompanied by eczema of the adjacent tissues. Operation—extirpation of the outer half of the nail and matrix. Anesthesia induced by the administration hypodermatically of one drachm of a five-per cent. solution of eucain. Operation painless.

Case V. A private patient of Dr. Savitsky's; operator, Dr. Savitsky and the writer. Diagnosis—paraphimosis and sloughing of the glans penis. Operation—relieved the constriction by three incisions, opened also the purulent area of the glans. The amount of eucain used was one drachm of a five-per cent. solution hypodermatically. The patient had slight pain during the operation.

Case VI. Male; operator, Dr. J. Chalmers Da Costa. Diagnosis—dermoid cyst in the sacral region. The cyst had ruptured forming a sinus three inches in length which led from the sacrum to the surface of the body. Operation—incision and curetting the sinus, removal of the cyst walls, also of some of the periosteum of the sacrum to which bone the cyst was firmly attached. The duration of the operation was twenty minutes. The amount of eucain was two drachms of a five-per cent. solution hypodermatically. The wound was closed with four sutures and the operation was entirely painless.

Case VII. Female; operator, Dr. J. Chalmers Da Costa. Diagnosis—chrondroma on the palmar aspect of the hand near the fifth metacarpo-phalangeal joint. Operation—extirpation, gouging the tumor from the metacarpal bone, closure of the wound with seven sutures. This patient was nervous and somewhat apprehensive. She had looked forward to the operation with great dread. One drachm of a five-per cent. solution of eucain used hypodermatically not only permitted a painless operation but seemed to act as a sedative to her excited nervous system.

Case VIII. Male; operator, Dr. J. Chalmers Da Costa. Diagnosis—Albert's disease (bursitis of retro-calcaneal bursa and periostitis at insertion of tendo achilles). Operation—incision of bursa, removal of osteophytes from oscalcis, curetting of bursal sac, etc., closure of wound with four stitches. Operation was entirely painless.

CASE IX. Female; operator, Prof. W. W. Keen. Diagnosis—needle in the hand. The needle was extracted without pain. Ten minims of a five-per cent. solution of eucain was used hypodermatically.

CASE X. Male; operator, Dr. Horwitz. Diagnosis—suppurating bubo. Operation—excision, curetting, removal of a gland and application of pure carbolic acid. This patient had slight pain. The amount of eucain used was two drachms of a five-per cent. solution hypodermatically.

CASE XI. Male; operator, Dr. Horwitz; diagnosis, hydrocele. Operation—opening, drying the sac, application of pure carbolic acid, packing and insertion of two sutures. Two drachms of a five-per cent. solution injected into the tissues permitted a painless operation.

CASE XII. Male; operator, Dr. Horwitz; diagnosis, phimosis and concealed phagedena. Operation—circumcision and application of pure nitric acid to the ulcer. Two drachms of a five-per cent. solution of eucain injected into the prepuce did not secure a painless operation in this patient. It was not a failure, but was not so successful as is usual.

CASE XIII. Male, operator, Dr. Knox; diagnosis, traumatic gangrene of the tissues covering the first phalanx of the index finger. Operation—amputation at the middle of the middle phalanx, closure of the theca, stitching the flexor tendon to the periosteum and closure of the wound with five satures. The operation was painless, and the amount of eucain used was forty minims of a five-per cent. solution hypodermatically.

CASE XIV. Male; operator, Dr. W. J. Hearn; diagnosis, epithelioma of the forehead. Operation—excision and closure of the wound with four sutures. One drachm of a five-per cent. solution of eucain injected around the base of the growth. Operation was painless.

CASE XV. Male; operator, Dr. W. J. Hearn; diagnosis, thyroid cyst. Operation—a two-inch incision was made over the cyst, cutting layer by layer until the cyst wall was reached. The external surface of the wall was firmly attached to the surrounding tissues by old bands of adhesions, and the base of the cyst was attached to the thyroid cartilage. The cyst was separated from the surrounding tissues and from the thyroid cartilage by means of a dry dissector. The operation lasted twenty minutes. In this case two drachms of a five-per cent. solution of eucain was injected around the base of the tumor, and during the operation small amounts of the solution was dropped into the wound from time to time, amounting in all to one drachm. The result was entirely satisfactory. The patient said he felt "no pain at all." The cyst was the size of an English walnut, and six sutures were required to close the wound.

CASE XVI. Male; operator, Dr. W. J. Hearn; diagnosis, fistula in ano. Operation—five minutes after two drachms of a five-per cent. solution of eucain were injected into the sinus, the fistula was incised, curetted and packed without giving the patient any pain.

CASE XVII. Male; operator, Dr. W. J. Hearn; diagnosis, empyema. Operation—an incision was made between the sixth and seventh rib. The incision extended through all the tissues into the plural cavity. After a pint of pus escaped, a large rubber drainage tube was inserted and the outer end was stitched to the skin. The operation lasted ten minutes and was accompanied by very slight pain. After the operation was over it was found that Dr. Hearn began the operation three minutes after the eucain injection, instead of waiting for the required time of complete anesthesia, which is five minutes. The amount of eucain used was two drachms of a 5 per cent solution.

CASE XVIII. Male; operator, Prof. Brinton; diagnosis, melanotic sarcoma of the neck. Two drachms of a five-per cent. solution of eucain injected around the base and beneath the part removed, allowed a painless operation. This was an incurable sarcoma, and operation was performed simply to rid the patient of an ulcerated mass twice the size of an English walnut. The wound was closed with nine sutures.

CASE XIX. Male; operator, Prof. Brinton; diagnosis, epithelioma of the lower lip. Operation—excision by a V-shaped incision. The incision passed through the entire thickness of the lip. The mucous membrane was

closed with five fine silk sutures, and the edges of the wound were brought together with seven silk worm gut sutures. Two drachms of a five-per cent. solution were used hydodermatically. The operation was painless.

CASE XX. Male; operator, Prof. Brinton; diagnosis, fatty tumor on the forehead. Operation—a two-inch incision was made over the tumor, the tissues were divided layer by layer until the capsule was exposed. The capsule was then incised and the fatty mass removed, and after three ligatures were applied, the wound was closed with six sutures. Two drachms of a five-per cent. solution of eucain were used hypodermatically, and operation was painless from the beginning to the end.

CASE XXI. Male; operator, Prof. Brinton; diagnosis, large nevus that invaded three-fourths of the upper lip. Operation—the nevus was removed by a V-shaped incision, the apex of which extended one-eighth of an inch into the right nostril. The base terminated at the lower margin of the lip. The base of the part that was removed was one inch in width and consisted of the entire thickness of the lip and a mass of dilated blood vessels. After a number of vessels were ligated, the mucous membrane was sutured with six fine silk sutures and the edges of the wound were brought together with six silk worm gut sutures. Thus the number of sutures used in this case was twelve. To control the hemorrhage, clamp forceps were placed at the angles of the mouth and these naturally gave the patient considerable discomfort, otherwise the operation was painless. The amount of eucain used was two drachms of a 5-per cent. solution hypodermatically. The duration of the operation was twenty minutes.

Tracheotomy was successfully and painlessly performed in the Jefferson hospital during the month of October, 1896, on cases 22, 23, and 24 of our list, by Dr. Jones, clinical professor of laryngology in that institution. The anesthesia in each case was induced by eucain. Each patient received three drachms of a five-per cent. solution, two drachms of which were injected in divided amounts above, below and at the sides of the area in which the incision was to be made. The other one drachm was dropped into the wound from time to time during the operation.

CASE XXII. W. W., male, aged forty-two. Diagnosis, syphilitic stenosis of the larynx.

CASE XXIII. P. B., male, aged fifty-three. Diagnosis, inoperable sarcoma of the larynx.

CASE XXIV. H. A., male, aged fifty-three. Sarcoma of the larynx.

The operation for each of the above cases consisted in making an incision over the middle line and in the long axis of the trachea. This incision extended from the upper border of the cricoid cartilage; downward for two inches, it divided the skin and superficial fascia. The anterior layer of the cervical fascia was then incised and the sterno-thyroid and the sterno-hyoid muscles were separated. In each case the isthmus of the thyroid gland extended well up on the trachea and it was found necessary to incise the fascia which invested it in order to expose the trachea. The said fascia was incised by a transverse incision at the upper border of the cricoid cartilage, and this allowed the isthmus to be lifted and pushed downwards. In each case three rings were incised and a tracheotomy tube was inserted. The operation in each case lasted about twenty minutes, and anesthesia was complete throughout. The number of sutures used in cases 22, 23 and 24 were six.

An analysis of the twenty-four cases mentioned will probably convince the reader that in eucain we have an agent which is safe and reliable. Cases 22, 23, 24 are considered major operations. While cases 1, 4, 6, 7, 10, 14, 15, 16, 17, 21 are not major operations, they are such cases as ordinarily require the use of a systemic anesthetic to permit of operation. The operation on cases 15, 22, 23 and 24 was greatly facilitated by using a drug that induced anesthesia, but which allowed the patient the control of the trachea. With anesthesia by eucain, these patients are conscious and can keep the trachea still during critical stages of the operation. In anesthesia from a systemic anesthetic, mucous accumulates in the lungs and stomach and efforts at expulsion keep the trachea constantly in motion,

which movement greatly interferes with the operation. Chloroform and ether irritate the lungs and predispose the patient to acute bronchitis and pneumonia. Tracheotomy itself is a predisposing factor in pneumonia.

Taking these facts into consideration, it is well to select an agent to allow of a painless operation, which will not effect injuriously the respiratory organs while operating in their locality. No pulmonary symptoms followed the use of eucain in any of the above cases. Case 10 had mitral regurgitation. Two drachms of a five-per cent. solution had no effect on the circulation. Case 7 had an irritable heart and she was very nervous. Two drachms of a five-per cent. solution acted as a sedative to her condition. Case 17 had one pint of pus in the left pleural cavity; this naturally deprived the heart of a portion of its space. Two drachms of a 5-per cent solution had no effect on the circulation or respiration. The average duration of anesthesia from eucain is about twenty minutes. The time to wait for complete anesthesia is five minutes. Two drachms of a five-per cent. solution used hypodermatically will in the majority of cases be sufficient to induce anesthesia; but larger amounts can be employed if necessary. The number of sutures used in the operations were ninety-three. After using and seeing sutures employed in so many cases, I do not agree with the assertion made by Fuller (*International Journal of Surgery*, September, 1896,) that eucain exerts hardening action on the tissues.

PHLEGMASIA ALBA DOLENS.*

LUDWIG SCHROETER, M.D., BUFFALO, N. Y.

As in all other branches of medicine, so also in midwifery the tendency of the last decades has been toward preventive treatment, and the results of these endeavors have been so brilliant that some diseases are becoming obsolete, and the medical man of the future will be perplexed in reading about some diseases of the past.

The great horror of the obstetrician of former years (and partly of to-day) was puerperal infection, which killed 10 to 20 per cent. of the parturient women in hospitals towards the middle of this century; nowadays, with the aid of preventive asepsis, the mortality of parturient women is so low, that some hospitals claim the honor of not losing a single woman from sepsis during years. This may be the reason that in the latest textbooks of midwifery the subject of puerperal infection, with its different morbid forms, is treated rather briefly.

But there are classes of patients, for whom antiseptics seem not to have been invented; these are the poorer, uncultured classes, where women often deliver themselves or are delivered by kind-hearted, but not overly clean neighbors, and at best by midwives, many of them of the antediluvian type; and here it is that one can find puerperal infection in every possible form. Happening to practice among such a class of people, I have had the opportunity to see some forms of infection, which are not of every-day occurrence.

Phlegmasia alba dolens, or the white swelling of the leg, is a misnomer, as there are cases, although rare, in which the swollen leg is of a rather dark color. The etiology of this affection has been a mooted question for many years, and even now some points are not elucidated. Some authorities claim that the presence of a thrombus is essential; others think that the thrombus is a secondary development and not essential. Some authorities, whose side I would rather take, discriminate two forms of this affection; one from pressure by the infiltration of the connective tissue of the interior portion of the pelvis, with the resulting lymphostasis and consecutive

*Read before Obstetrical Section of Buffalo Academy of Medicine, June 23, 1896.

blood-stasis and thrombosis of the veins; and the second form, the septic form, in which the stage of lymphostasis is not present or is very brief. In the May, 1895, meeting of the London Obstetric Society, Dr. Roberts mentions, as an etiologic factor of great importance, hemorrhage at or after labor; in none of the cases I have seen was hemorrhage present. Vidal claims to have discovered in many cases of phlegmasia a streptococcic invasion of thrombosed veins; by others the bacillus coli communis has been incriminated.

Varicose veins and sluggish circulation are thought to predispose to phlegmasia. The affection appears usually during the second or third week after labor, is sometimes preceded by a chill, begins with a feeling of numbness in the leg, which swells, assumes a shining appearance, is mostly white, but in some cases has a livid hue; in most cases only one leg is affected; in some others, both legs, and in rare instances, the arms may be attacked. The veins are often felt like strings. The usual duration of the affection is four to six weeks; in most cases there is *restitutio ad integrum*; in others, deep suppuration develops, or the veins may remain obliterated after all other symptoms have disappeared. The thrombus may be washed away and produce emboli, or if of putrid character, give rise to metastatic abscesses. It may also happen that an embolus may occlude the pulmonary artery, with sudden death as a result. In the majority of cases the prognosis is favorable *quoad vitam* not so *quoad valetudinem completam*, as there may remain adhesions of the pelvic organs, sacculated abscesses, etc.

I have seen, during the last six years, over twenty cases of phlegmasia, of which I have notes only of six cases in my own practice and one in consultation with Dr. Hartwig, and will give you concise histories of these seven cases.

(1.) Mrs. B., mother of five children, had two abortions; all her confinements were normal. On June 24, 1892, she was delivered by a midwife of a living child; was up and around two days later. I saw her July 5th. She had been sick two days, beginning with a feeling of numbness in her right leg. She had pains while moving her limb; loachia normal, no sensitiveness over the abdomen, leg swollen, shining, of hard consistency, sensitive to touch, femoral vein distinctly felt thrombosed; I did not see her for four weeks; August 15th, the size of the right leg was nearly double that of the left; she complained of excruciating pains, which prevented her from sleeping. September 3d, she was walking around, complaining of numbness, but no pains; two weeks later she was completely well.

(2.) Mary P., thirty-five years old, multipara; saw her October 10, 1892, in her sixth confinement. A midwife had performed podalic version, but could not deliver the head; after two hours I was called and extracted the head manually. The puerperium was uneventful till October 18th, when she felt severe pains in her left leg, preceded by chills; the leg was swollen, sensitive to touch, hard, shining, with a livid hue; no thrombus could be felt; the left hypogastrium was very sensitive. For six weeks the same condition prevailed, with temperature ranging between 102° and 104°. November 26th a tumor could be felt over the left Poupart's ligament. I applied hot poultices, and November 28th made a deep incision, evacuating about a cupful of ichorous pus. The swelling of the leg rapidly subsided and in the middle of November she was out of bed.

(3.) Mrs. O., thirty-eight years old, had given birth to seven children, three of whom had been delivered by forceps. After her fifth child, she says, she had a stormy puerperium, with high temperature. She was laid up at that time for ten weeks. April 6, 1893, I was called to see her, after she had been in labor for thirty-six hours. I found the head with its greater part over the brim in left occipito anterior position, waters drained off twenty hours before, labia majora greatly swollen and congested. I applied forceps but did not succeed in bringing the head into the cavity; as the child was dead, I proposed perforation, which was refused; another physician was called but he also had to desist after a trial with the forceps and perforated. April 12th, she developed all the symptoms of phlegmasia in her right leg. No thrombosis could be felt; she

suffered for four weeks and fully recovered; her temperature never rose above 101°, and her pains never were very severe.

(4.) April 12, 1893, I was called to see Mrs. B. H., who delivered herself of her fifth child twelve days before; she complained of pains in her left leg, which was swollen, slightly puffing, white and glistening; the femoral vein was distinctly thrombosed; lochia normal, abdomen not tender, uterus slightly movable and painless. She was sick for four weeks and fully recovered.

(5.) Mrs. S., twenty-six years old, in labor with her second child for twenty-four hours, bag of waters had broken ten hours previous to my visit; the midwife who attended to the case thought the second period lasted over four hours. It was a face presentation with the chin to the front. I applied forceps and delivered her of a still-born child. Eight days later, May 15, 1894, I saw her again. She was in great pain, extending in the direction of the right sciatic nerve, discharges normal, her right leg slightly swollen, shining and of hard consistency, femoral vein thrombosed, abdomen not sensitive to touch, uterus freely movable. She was laid up for over four months with no appreciable change during all that time. I saw her again in July, 1895. She was still limping at that time and the femoral vein remained thrombosed. I have not seen her since.

(6.) Mary W., forty years old, had five normal labors. I saw her in June, 1895. She was in labor about forty hours, attended by some neighbor woman. I found the head at the outlet of the pelvis in the low transverse position, occiput to the right; I waited for rotation of the occiput for more than an hour, but notwithstanding very energetic pains, there was no rotation, so I applied forceps and delivered the woman of a still-born boy, whom I resuscitated. Six days later the woman complained of numbness in her right leg and pain in her right glutea; two days later the leg was considerably swollen, shining and of a livid color, very sensitive; no thrombosis could be ascertained; temperature 104°, preceded by a chill, right hypogastrium very tender, lochia diminished in quantity and foul smelling; a week later a deep fluctuation could be felt below Poupart's ligament. I made an incision and about an ounce of pus was discharged; she felt better for a few days, her temperature came down to 100°, but then rose again to 104° and she complained of severe pains on the inner side of the same leg. The woman was put under chloroform narcosis, and I made a deep incision in the region of the vastus internus muscle and a great amount of very bad smelling pus spurted out; she had rest again for about two weeks, when she started to complain of pain in her left leg, which became swollen and shining; the most sensitive spot was below Poupart's ligament. As the woman was very emaciated, and her home was by no means of such a character as to give her the necessary comfort in such a long disease, I had her removed to the Erie County Hospital; there she had several metastatic abscesses opened and besides a thoracotomy was performed on account of an empyema on the right side. I saw her in October fully recovered.

(7.) Mrs. D., thirty years old, midwife, had five normal labors; engaged Dr. Hartwig for her sixth confinement; but before the doctor reached her house she gave birth to a boy; she developed, about fourteen days post partum, all the symptoms of phlegmasia alba, with which she was laid up for about three months. This case would speak very strongly against the infectious character of the affection; but the patient admitted that she was examined by her mother, who being anxious "to help" her daughter, introduced her fingers into the vagina.

The treatment in all my cases was purely symptomatic; absolute rest and elevation at the affected limb; anodynes, and last but not least, a warning against rubbing with different liniments for the fear of embolism. This warning is of importance in the practice among the poorer classes, as there every pain is treated by rubbing with some remedy. In two cases I tried the application of a mixture of liqu. ammon. acot. spr. æther and camphor, warmly recommended by Dr. Clendenin, *The American Journal of Obstetrics*, of 1890, but it gave me no satisfaction.

CURRENT LITERATURE CONDENSED.

Acetanilid Poisoning.[1]

I received an urgent call one morning to see Mr. K., who, the messenger said, was in a fit. I found the patient lying upon the bed unconscious and in a semi-rigid condition; pulse imperceptible at the wrist; heart's action very feeble, and extremities cold. But the most striking condition was the color of the skin, which was deeply congested, giving the patient that peculiar blue appearance observed in cases of lightning stroke, the extremities especially being almost black, and the ears quite so. In fact, they did not regain their natural color for twenty-four hours. I first administered hypodermatics of whiskey, followed by others of nitro-glycerine and strychnia, hot applications to the extremities, and instituted artificial respiration. Under this treatment I had the satisfaction, after a time, of seeing my patient gradually improve until finally he recovered. His wife had gotten up at five o'clock, while it was yet dark, and had found him lying crosswise on the bed. She shook him, but as he did not awaken, thought he was sleeping soundly and went down stairs, it being still dark so that she did not notice his condition. She came up stairs again as it was getting light, and then saw that he was getting blue. She tried to arouse him and found that she could not, and immediately called to the neighbors and sent for me. It was not until Mr. K. had recovered so far as to be able to talk that I found out what he had taken, though the symptoms led me to believe it was one of the coal-tar derivatives. In answer to my questions as to what he had taken, he said nothing but a tablespoonful of salts upon retiring the night before. On being asked if he knew that it was salts that he had taken, he said yes, but remembered the stuff did act rather queer, for it would not dissolve in water. An inspection of a small portion that was left plainly showed acetanilid, and if anything was needed to confirm this it was found in a faint pencil-mark on the outside of the wrapping-paper. It was some that had been in the house for over a year, left by an old lady that was visiting them, and who was in the habit of using it. He remembered that she had only taken a small amount, as she said that it did not taste right. At the time his wife also took a small amount, and she remembered that they were both sick after taking it, but she thought it was due to some canned plums that they had eaten, and had consequently thrown the rest away. Mr. K., not having been in the habit of taking salts, would not have so readily noticed their insolubility. He said that about 9.30 the evening before he took what he supposed to be a heaping tablespoonful of salts, and retired about ten o'clock. Twenty minutes or so after retiring he commenced feeling bad. Laid perhaps twenty minutes longer, then attempted to get up, but found that he could not control his limbs, and said "he felt," to use his own words, "as if there was something settling over him" Attempted to go to bed and fell on the floor; afterward he succeeded in reaching the bed, but knew nothing more. I will add that the urine first voided was of a dark brown color.

It is said that when an excessive quantity of acetanilid has been absorbed, the alkalinity of the blood is lessened, the red corpuscles destroyed, and the hemoglobin liberated eventually appears in the urine, which becomes a dark brown color. The quantity of uric acid in the urine is increased.

After he had measured out an amount estimated equal to what he had taken, I had it weighed and found it to be over 200 grains.

1 William C. Burnce, M. D., in Columbus Med. Journal.

Aphasia of the Hand.[2]

The seat of language, or rather of ordinary motor speech, has generally been held to be in Broca's convolution or the foot of the third frontal, and the lesion of aphasic disorder of the motor type has been considered as there located, at least in right-handed subjects. The expression of and communication of ideas is, however, not strictly confined to speech, and we have therefore among the different species of

2 Journal American Medical Association, November 28.

aphasia an amimia, or lack of capability of expression by signs, and agraphia or inability to do the same by writing. This last has been called by Charcot "aphasia of the hand," a term that has a certain appropriateness, but which lacks the essential element of aphasia in that writing is an indirect and accessory method of the conveyance of ideas, not the important and primary one. The real and only aphasia of the hand properly so-called, as Professor Grasset says in a recent article in *Le Progrès Médical*, is that of the deaf mute who expresses his faculty of language by the fingers instead of the muscles of articulation. The cases of this kind are, as he remarks, very rarely reported in medical literature, and that which he gives has therefore rather more than an ordinary interest and importance.

The patient, an intelligent deaf mute, aged fifty, was an arthritic subject who presented all the signs of arteriosclerosis, and who had had for two years the symptoms of a gradually progressive softening of the brain, without initial *ictus*, due apparently to thrombosis of some branches of the left sylvian artery. There was no symptom of sensory aphasia, the hearing had been congenitally absent, and word blindness was lacking. He read easily and understood what was said to him in the sign alphabet. When requested he would point out words or letters on the page very accurately and readily; there was a certain degree of impairment of the intelligence as compared with what he had been, but enough remained to redeem him from any charge of absolute imbecility or dementia. He understood what he read or what was said to him, but was unable to reply as he had been accustomed to with his right hand, though he managed to do so with his left. He was also unable to write, and this disability was complete.

There was no such paralysis of the right arm or hand as would account for the phenomenon, though there was a certain degree of paresis. Neither this nor the impairment of intelligence sufficed to explain the existing defect, and the center of language by the deaf and dumb alphabet seems from this observation to be, in a measure at least, distinct from the motor center for the ordinary movements of the arm or hand. We have here a congenital deaf mute, intelligent, fairly educated for his condition, capable of understanding and of communicating his ideas with his left hand, but absolutely incapable with his right, which was before his principal organ of language, so to speak. The power of writing, which had never been acquired by his left hand, was completely lost, while the ability of making ordinary coördinated movements with his right hand was retained. There was no statement as to any facial paralysis, as would have been the case had it existed; the paresis is mentioned as involving only the right arm. The question that is so clearly suggested by this is what center for speech was involved in this case. Was it the usual one for motor aphasia in the third frontal, or is it situated at the foot of the second frontal or in the adjacent portion of the anterior ascending convolution, the center for the arm and fingers? The fact that agraphia, which existed in this case, is a common result also of lesions of Broca's center would speak in favor of the existence of the lesion in the usual seat, but of course this is as yet only a matter of conjecture, while the attending brachial paresis might suggest the probability of its occurrence nearer the arm center, in the foot of the second frontal convolution in this particular instance.

It is to be reasonably expected that the case will not be lost sight of, and that at some future time this matter will be cleared up by an autopsy. As it stands the observation is almost unique as giving an example of a form of aphasia that has been very little noticed by writers on the disorders of speech.

A man accused of arson admitted his guilt to one of the jurors, an Irishman —the other eleven being, fortunately for him, his friends—and promised him $5000 to secure a verdict in the second degree.

"Well," he said to the Irishman, when the jury had come in with a verdict in the second degree, "did you have a hard time bringing them around?"

"Indade oi, did," Pat replied with a weary shake of his head as an earnest of the labor he had. "Iviry wan of thim other fellies wanted to vote for acquittal."—From the "Editor's Drawer," in *Harper's Magazine*.

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PUBLISHERS' NOTICE.

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EDITORIAL.

THE DECLINE OF QUACKERY.

A subscriber in Nebraska has recently mailed to us the prospectus of a diploma mill, with the request that the REPORTER should expose and exert its influence to correct the evil. We wish, in the first place, to thank the doctor for his appreciation of what the REPORTER considers one of the fundamental duties of a medical journal. A literary magazine is a private enterprise, furnishing reading matter to its purchasers. A medical journal, on the other hand, should rep-

resent the highest interests of its profession and should be in touch with the needs and aspirations of its subscribers.

The institution to which our correspondent refers, is known as the Wisconsin Eclectic Medical College. It is located at Milwaukee, but the circular deals almost entirely with the Correspondence Department at 1001 Congress St., Chicago. We will be generous enough to give the college a little more free advertising. The total fees for matriculation, examination and graduation are $50. It is possible for matriculants to pass an examination at their homes and to receive a diploma without attendance. In fact, the prospectus ignores the question of instruction by lectures or other means than home study from text-books. To the shame of the State of Wisconsin, we quote, "The college has, in all things, complied with the law . . . . No railroad, banking or commercial company could be more legally organized than this medical college . . . . When the State accepts a fee for incorporation and affixes its seal to a charter declaring the purposes and methods of the chartered institution, it thereby sanctions such purposes."

We need not describe the feeling which one naturally has when one encounters a boy who assures us, as a preliminary remark, that "he hain't done nothing," or a woman who prates of her honor. A very similar feeling is conveyed by the asseverations of the Wisconsin Eclectic Medical College of its legal status. Being familiar with the excellent work of the Illinois State Board of Health, we were somewhat surprised to learn that this institution could cross the line and carry its business into Chicago. But the Board informs us that it is powerless in the matter, save that it can and does refuse to recognize the diplomas of "graduates" of this mill. However, we are rejoiced to learn that the Attorney General of Wisconsin has begun action against the college, in order to revoke its charter. It would seem an easy matter to do so, since the college is chartered with power to "teach students the science of medicine, of preparing them to practice as physicians, and conferring upon them, they having been examined and having succeeded in passing such examinations as to their knowledge of said science the degree of 'Doctor of Medicine,' or such other degree as may be proper according to the knowledge exhibited on such examination." Teaching does not mean the recommendation of text-books for home reading nor the acceptance of information picked up, no matter how, during the past life of the matriculant. It is as absurd to construe the permission of the State as a right to examine and graduate without teaching, as to say that a company, chartered to buy and sell certain goods, is empowered to sell goods which it has not bought but has stolen.

The Illinois Board of Health, in spite of its limited powers, has indirectly, through the State Attorney, secured the revocation of the charter of the Illinois Health University, an institution doing business on about the same plan as the Wisconsin Eclectic Medical College. This revocation was secured in July and, in October, an appeal of the University was refused, so that a battle for legitimate medical education has been won.

Although there is much to justify a pessimistic view, both with regard to the qualifications of regularly graduated physicians and the persistence of out-and-out quackery, we believe that a careful study of the subject must inspire hope for the near future. Most States now require some form of registration which is a check on the most flagrant forms of quackery while the admission of several territories as States—

ill-advised as it is on purely political grounds, so long as each State is equally represented in the Senate—does away with partially governed areas in which quackery could breed and flourish to an extent limited only by the development of too great rivalry for a livelihood. In many States, a genuine disposition exists to co-operate with the medical profession in requiring the matriculate to have some sort of a preliminary education, in requiring the graduate to pass an examination before a board independent of college faculties and in compelling the utterly unqualified quack to seek other fields. True, in most instances, only a common school education is required and the State thus, in a sense, sets the seal of its approval on an entirely inadequate preliminary training, but by 1900, a few States and colleges will require an academic training, which is all that can reasonably be expected as a minimum. The licensing boards, on the whole, work satisfactorily and serve, not only to prevent the graduation of students when their subsequent rejection is probable, but also to deter the entrance upon medical studies by men of deficient education.

Within the last few years, one of the most widely advertised patent medicines has proved a financial failure and, so far as an outsider can judge, the pretentious claims and extensive newspaper prominence of advertising physicians, are not in accord with the meagre incomes which they apparently receive. Many quacks, feeling this contrast, strive only for out-of-town trade and are almost unknown in their homes, while the successful local quackery is managed by syndicates which hire physicians at low salaries. People still like to be humbugged, quackery is by no means exterminated, but, all things considered, the evil seems to be on the wane and the laity are less hostile to the efforts of the regular medical profession to protect the whole country, as well as themselves, from the depredations of charlatans.

Recognized Them at Once.

We were all telling mosquito stories at a New Jersey summer resort, when one particularly audacious man said: "Oh, that's nothing. I was off the coast at Barnegat last summer on a fishing trip, and while we were out on deck early in the evening, smoking and chatting, a great cloud of mosquitoes, all of them monstrous birds, came out from shore and settled on the boat; and do you know, in fifteen minutes they had stripped it of every inch of canvas, and left the masts bare as beanpoles!"

We held up our hands in deprecation at this tale, when another of the party exclaimed: "Well, don't be astonished. I can vouch for that. It was only a week after that I was on a trip along the coast, and the same swarm of mosquitoes came out after us."

The first speaker didn't seem to appreciate this unexpected support, for he muttered: "Humph! They did, eh? Well, how did you know they were the same mosquitoes, eh?"

"How did I know?" repeated the other, with a chuckle. "How did I know? Why, they all had on canvas overalls."—From the "Editor's Drawer," in *Harper's Magazine* for December.

Ringing for Prayers.

A very pretty story about a confiding child is told of the four-year-old son of a member of the Georgia Legislature. Having left the boy in a room of one of the big hotels of the metropolis, with the command to go to bed immediately, he went down to seek his congenial friends in the office. The bell-boys were soon thrown into consternation by the many and various calls from the room in which the little fellow had been left, and quite a number of them were soon collected there. But it was not ice-water, or fire, or a "B. and S." that the child wanted. He astonished the boys with this unusual request: "Please, sirs, send some one to me to hear me say my *prayers*."—From the "Editor's Drawer," in *Harper's Magazine*.

CORRESPONDENCE.

A MOVE IN THE RIGHT DIRECTION.

EDITOR REPORTER—We ask you to give publicity to this letter and accompanying resolutions, to the end that, in all communities afflicted with the pestiferous practice of lodge doctoring, physicians may be encouraged to assert their independence through organization.

Here, in Santa Clara County, Cal., containing 70,000 population, all the physicians of the county, numbering 124, have entered the compact that has rid us of a slavish evil, and wrought independence and freedom for the practitioners of medicine. Investigation shows that medical compensation for lodge work averages about fifteen cents on the dollar.

Even respectable lodge physicians feel a sense of degradation in giving their services for fifteen cents on the dollar, and the ever-increasing spread of these alleged charitable institutions is absolutely destructive to the business of other physicians.

The main incentive of the persons who band themselves together in lodges is to get cheap doctoring; they are willing to take, but not to give. They belong to protective unions, and the same right should not be denied physicians. Ninety-nine per cent. of these people are able to pay reasonable fees to physicians, but will not do so as long as a few doctors in every community for the sake of immediate gain can be induced to stand as driven guys to the lodge politicians. No preacher or lawyer would give his services to these people for fifteen cents on the dollar. No grocery store or merchandise firm would contract to supply these lodges with goods at fifteen cents on the dollar of actual worth.

The remedy indicated in the subjoined resolutions is simple, and manifestly efficacious, depending upon the personal honor and free will of those concerned. Where one doctor temporarily profits by contract work the business and ethical rights of fifty others are violated; hence an overwhelming *esprit de corps* is created among physicians which will sustain a strict observance of the pledge.

LINCOLN COTHRAN, M.D.,
Secretary.

SAN JOSÉ, CAL., November 18, 1896.

RESOLUTIONS.

Whereas, Rendering professional services at a stipulated fee per capita per annum is derogatory to the dignity of the medical profession, we, the undersigned physicians and surgeons of Santa Clara County, California, enter into the following agreement:

First.—We mutually, jointly, and individually, pledge our word of honor not to enter into any contract or agreement, or renew any existing contract or agreement, either written, verbal or implied, to render medical or surgical services to any lodge, society, association or organization.

Second.—We will not render medical or surgical services to the members of the above-mentioned bodies for less compensation than we charge the general public for similar services.

Third.—This agreement shall not be construed to affect existing contracts between physicians and surgeons and the above-mentioned bodies.

Fourth.—These pledges shall take effect and be in force for a term of three (3) years from and after May 22, 1896.

This agreement shall not apply to hospitals and purely public charitable institutions.

AN APPLICATION FOR FURUNCLES OF THE EYELID.

℞

Tincture of camphor,	} of each	15 grs.
Precipitated sulphur,		
Limewater,	} of each	150 grs.
Rosewater,		
Gum arabic		3

M. To be painted on the lids once a day.—*Wiener Klin. Rundschau.*

ABSTRACTS.

MODERN SLANG IN SHAKESPEARE.

Leaving legitimate words, and turning to the children of the street and the market-place, we find some curious examples, not only of American slang, but of slang which is regarded as extremely fresh and modern. Mr. Brander Matthews, in his most interesting article on that subject, has already pointed outth at a "deck of cards" is Shakespearean. In *Henry VI.* (Third Part, Act V., Scene I.), Gloucester says,

> "But while he thought to steal the single ten,
> The king was slyly fingered from the deck."

Mr. Matthews has also cited a still more remarkable example of recent slang from the Sonnets, of all places in the world, where "fire out" is used in the exact colloquial sense of to-day. It occurs in the 144th Sonnet,

> "Yet this shall I ne'er know, but live in doubt
> Till my bad angel fire my good one out."

"Square," in the sense of fair or honest, and the verb "to be square," in the sense of to be fair or honest, are thought modern, and are now so constantly used that they have wellnigh passed beyond the boundaries of slang. If they do so, it is but a return to their old place, for Shakespeare has this use of the word, and in serious passages. In *Timon of Athens* (Act V., Scene V.) the First Senator says,

> "All have not offended;
> For those that were, it is not square to take
> On those that are, revenges."

In *Antony and Cleopatra* (Act II., Scene II.) Mecænas says, "She's a most triumphant lady, if report be square to her."

"In the soup," to express defeat and disaster, is apparently very recent, and yet it is singularly like the language of Pompey in *Measure for Measure* (Act III., Scene II.), when he says, "Troth, sir, she hath eaten up all her beef, and she is herself in the tub."

Even more recent than "in the soup" is the use of the word "stuffed," to denote contemptuously what may be most nearly described as large and ineffective pretentiousness. But in *Much Ado about Nothing* (Act I., Scene I.) the Messenger says, "A lord to a lord, a man to a man; stuffed with all honorable virtues." To which Beatrice replies, "It is so, indeed; he is no less than a *stuffed man*: but for the stuffing,—Well, we are all mortal." Here Beatrice uses the phrase "stuffed man" in contempt, catching up the word of the messenger.

"Flapjack," perhaps, is hardly to be called slang, but it is certainly an American phrase for a griddle-cake. We must have brought it with us, however, from Shakespeare's England, for there it is in *Pericles* (Act II., Scene I.), where the Grecian—very Grecian—fisherman says, "Come, thou shalt go home, and we'll have flesh for holidays, fish for fasting days, and moreo'er puddings and flapjacks; and thou shalt be welcome."
—From Shakespeare's Americanisms." by HENRY CABOT LODGE, in *Harper's Magazine*, for January.

The use of ozone in tuberculosis has given excellent results, according to Labbe and Oudin, (*Journal American Medical Association*). In two months there was a constant increase of oxyhemoglobin, increased numbers of red corpuscles, increase in weight, increased respiratory capacity, with rapid improvement of the functional symptoms, cough, etc. Out of the total of thirty-eight cases treated, they consider seven cured in the first degree, six in the second, and sixteen showed marked improvement; six died. They add that their patients all lived in unhygienic surroundings, and had no other treatment, and that the winter was long and severe. The inhalations were only administered fifteen minutes a day, and they expect much finer results with more comprehensive treatment.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated meeting, November 11, 1896.

The President, DR. J. C. WILSON, in the chair.

DR. J. T. RUGH read a paper on

EIGHT PRIMARY MOVEMENTS OF THE NORMAL SPINE AS A BASIS FOR THE GYMNASTIC TREATMENT OF SCOLIOSIS AND ALLIED CONDITIONS.

[See page 673.]

DR. H. C. WOOD presented to the Society Mr. Lewis A. Tallerman, who came from London with a letter of introduction from Dr. Lauder Brunton. Mr. Tallerman delivered a short address on the Tallerman-Sheffield Patent Local and Medical Dry Air Bath for the localized application of dry air heated to a high temperature.

The efficacy of the apparatus was tested on two patients from the Philadelphia hospital: one a case of saturnine gout, the other one of lumbago. Dr. H. C. Wood said that Mr. Tallerman is the inventor of a new method of treating chronic rheumatism, rheumatoid arthritis, sprains, both acute and chronic, and a large number of general inflammations and rheumatic affections. There have been published in the journals, especially in the *Lancet*, a number of very remarkable results said to have been obtained by the use of the apparatus of Mr. Tallerman, who will briefly state the principles of its construction and show its immediate mechanism, and then it is proposed to put the apparatus to the test on two patients whose treatment will require from forty to sixty minutes, so that the results of the treatment can be seen.

MR. LEWIS TALLERMAN said that the therapeutic effects produced by the Tallerman-Sheffield Localized Hot Air Apparatus and Treatment are several. Among them are an enormous increase in the circulation, profuse perspiration of the whole of the body, relaxation of the part, dilatation of the vessels and an increase in the body-temperature, which it has hitherto been regarded as impossible to obtain from local applications of heat. The temperature is usually raised under treatment from 1½° to 4°F, and returns to the normal in from fifteen to twenty minutes after the operation. In rheumatic affections, rheumatoid arthritis, gout, lumbago, sciatica, sprain and kindred disorders, pain is relieved or entirely removed at the first operation and the patient usually expresses the great relief he feels and his ability to move his body and limbs with greater freedom. The progress of the disease is arrested and a curative process is set up at the first operation and it is a remarkable circumstance connected with this relief that the limbs and body outside the apparatus participate in the benefit, and that the benefit is not limited to the part placed in the apparatus and subjected to direct treatment. The Tallerman-Sheffield process is absolutely painless and soothing throughout, and, if permitted, patients under treatment would frequently fall asleep. In very chronic cases and when the disease has advanced to that stage at which the joints are held rigidly fixed by very firm, fibrous adhesions, it is found better and more expeditious to treat the limb for a short time so as to prepare it for more active interference and then to break the adhesions down under an anesthetic. By this method there will result little inflammatory reaction, and if the limb is placed in the apparatus and treated immediately the patient wakes from the anesthetic, the heat will have a remarkable anodyne effect and most of the pain will subside in a short time.

This method has now been adopted in several large London hospitals, including St. Bartholomew's. Mr. Alfred Willett and Mr. Walsham, and other medical men had witnessed the effects of the treatment in a preliminary trial and this was followed by two of these apparatus being sent to that hospital and they were tested in a series of selected cases over a period of two months. At the expiration of that time Mr. Willett delivered a clinical lecture* at that hospital and pointed out the great value of the treatment in certain cases. The lecturer pointed out that in so many surgical cases would the apparatus be serviceable that he hoped that it would not be long before one was available at any time at the hospital and also a nurse trained in its use. He also called the attention to certain medical cases which by analogy he thought might be treated on these lines with great benefit.

This was followed by an invitation from the North-West London Hospital, at the suggestion of Mr. Mayo Collier, where a series of test-cases were treated over a period of two months. The results in these cases were published in the *Lancet* for January, 1895. Among these were cases of rheumatoid arthritis, which had been under treatment at the hospital for two years and had been treated prior to that at the University College Hospital. One patient, a woman of 64 years of

*Published in the *Clinical Journal* for May, 1894.

age, was, according to the hospital notes, quite unable to dress or even to feed herself. Dr. Knowsley Sibley, the physician in charge of the case, kept her under observation for abont two years to ascertain the permanency of the benefit and then exhibited her at the Medical Society of London, with other cases. She had been kept under treatment for two months, but after the eighth operation she was able to return to her work as a seamstress and has been continually at work since, now over two years. For case-notes and reports upon the case, the *Lancet* for June 6 to August 29, 1896, may be consulted. In one case a temperature of from 250° to 260° was experimentally applied for over two hours, and that without the skin becoming unduly sensitive. There is a very great increase in the circulation and morbid matters and morbid products are thrown out of the system, leaving a healthy condition of both joints and tissue.

DR. FREDERICK A. PACKARD demonstrated a case of saturnine gout that had been extremely obstinate to all forms of treatment in so far as his articular symptoms were concerned and had at the time suffered from severe pain in one of the big toes, which was constant in spite of all that could be done. On learning of the Tallerman-Sheffield method of treatment, Dr. Packard thought that the case would be a good one for demonstration because the man was suffering pain in the big toe so that it could not be touched or flexed, and also because he had tender nodes on the hands, so that the effects on peripheral processes far from the seat of treatment could be seen.

DR. H. C. WOOD in answer to the question, "Is not moisture produced by the great heat, and liability of scalding present?" said that the only moisture about the apparatus is that from the limb and this is said to be gotten rid of by opening valves and letting out the air from the cylinder. He presented a case of lumbago in which it was supposed the apparatus would afford marked relief.

After the demonstration DR. WOOD pointed out that the man with lumbago, who had moaned and groaned when touched and had been in the hospital a week without much benefit was, after the treatment, able to get up.

The case of saturnine gout had been under competent medical care for some weeks, without much gain. The man had not moved his toes for three months, but after the treatment he was able to move the toes freely. In fifteen minutes after the treatment was begun he could move his toe, while the pulse went up 20 beats and the temperature rose 1.4°; the other man's temperature went up about a degree in forty minutes and his pulse increased nine beats and gained very distinctly in fulness. The temperature within the apparatus was 260° and the pelvis was kept in it for forty minutes. The patient with saturnine gout stood a temperature of 260° for three minutes; then it had to be reduced to 255°, which he stood for some time. Most of the time the temperature was 248°.

MR. TALLERMAN said that he would prefer these patients to have two or three applications to make assurance doubly sure. He would not feel satisfied with a single application that it would give the best and permanent results. It is his custom in such cases to repeat the treatment a few times.

DR. A. G. REED inquired if pain in the fingers was relieved by the application to the foot.

MR. TALLERMAN replied that it was.

DR. MAX J. STERN asked how the cases would be on the morrow.

MR. TALLERMAN replied that the muscles would probably be stronger, and the present good effects continued. If this were a patient being treated by a physician, he would not be satisfied to let him go. The physician would prefer to treat him once or twice more to make sure.

DR. W. S. STEWART asked what precautions were taken to avoid bad after effects from the rise in temperature.

MR. TALLERMAN said that the patient was briskly rubbed down with a rough towel, and he had never known any bad effects to ensue.

In cases of rheumatoid arthritis, when patients are strong enough to allow of it, he treats them first for four or five times a week and afterwards three times a week. He stated that there was a smaller apparatus for the hand.

DR. H. C. WOOD said that the immediate results achieved by the apparatus were remarkable and that it is stated on the highest authority in England that permanent results are reached; so that the apparatus seems to be an important addition to our therapeutics in a class of cases that have been exceedingly anxious and worrying to all.

DR. MAX J. STERN read a

REPORT OF WORK WITH ROENTGEN RAYS AT THE POLYCLINIC HOSPITAL, WITH EXHIBITION OF SKIAGRAPHS.

DR. ARTHUR W. GOODSPEED called attention to one or two possible improvements in the form of a tube that has not reached the market yet, a tube that was given him two or three weeks ago and which he has been using very successfully for most of the work he has done this fall. It is very much smaller than the ordinary tube in common use, and is especially designed for maintaining its exhaustion permanent. The trouble has been that the tubes would become too highly exhausted with use and special devices have been necessary to obviate this difficulty. One device is to have a third electrode. The first Crookes' tube of focus type used by Dr. Goodspeed (April 6, 1896,) was obtained from the

physical cabinet of the University of Pennsylvania, where it had been for fifteen or twenty years. It has two electrodes besides a platinum disc in the middle; so that there is nothing new in having an extra electrode. The fact, however, that the exhaustion can be varied by expert manipulation of these electrodes is a matter of great importance.

The new tube referred to is coated with some fluorescent substance which seems to occlude on its surface a certain amount of air which is set free by the action taking place in the tube. If the action is too great the tendency to raise the exhaustion is counteracted by the setting free of the gas spoken of; so that to a certain degree the exhaustion of the tube may be maintained constant. If such a tube be worked too roughly, that is at too high an electromotor force, the exhaustion is likely to run down. This may be remedied by allowing the tube to rest a few minutes.

Prof. Hutchinson of Bowdoin College, it was believed, is the originator of this tube. Dr. Goodspeed's experience is not sufficient to give a professional opinion in regard to it yet, but he believes it will be a success.

In regard to the statement of the effect upon the skin Dr. Goodspeed's experience has not agreed with that of Dr. Stern. The difference may perhaps be either in the apparatus itself or in the method of using it. Dr. Goodspeed has not used the tube as close to the surface as seems to have done in one case—never closer than six inches. Dr. Goodspeed's own hand has been in contact with X-rays for hours at a time since February of this year and he has never noticed any effect whatever upon his own flesh or upon any of the patients who have been sent to him by physicians. This effect upon the skin may point to some conclusion which may be evidence in favor of one of the two or three theories that are being discussed now in the physical laboratories in regard to the ultimate nature of these X-rays. One of the theories is that the X-rays are of the nature of light, of very short wave-length. The other theory, which seems to have been gaining ground very rapidly of late, is that the X-rays are material particles which are shot off from the exterior surface of the tube by the bombardment of particles within the tube and that these pass through the fleshy material of the subject and produce their impress upon the plate. If glass particles are shot off from the outside of the tube and are impacted in the flesh why should not some physiologic change be produced? If this matter is followed up and record made of cases, with the degree of severity noticed, valuable evidence may perhaps be secured in favor of the material theory. Therefore those who have cases in their charge should make records of all peculiar conditions, as these records may be valuable in the future.

Mr. John Carbutt spoke only on the practical side of radiography. In the use of the plates, a great deal of success lies in the development. The plate on which most of the subjects shown were made is prepared with a fluorescent substance in the emulsion which causes it to absorb X-rays and prevents their passing through the plate. It was early observed in the use of the dry plate in X-ray work that on the ordinary plate the developed image showed almost as soon on the back as on the front. It was at once concluded that the X-rays had such penetrability that a greater part of the rays must be lost. This loss was attributable to the prolonged exposure in the early part of this year, some of the plates being exposed from one to one and one-half hours by Prof. Goodspeed. In the second or third week in February, Mr. Carbutt took at the Maternity Hospital, for Prof. Magie, of Princeton, a radiograph of a woman's hand, and with one of his most sensitive plates, with an exposure of twenty minutes, got merely a silhouet of the hand without showing bone-formation. He then employed the special or X-rays plate, giving the same exposure, and got full delineation of the bones of the hand. Dr. Goodspeed made an exposure of one the same day in twenty-five minutes and good negatives were secured from that time to the present. Mr. Carbutt said that a good deal of the best work had been done by Prof. Goodspeed, and good results have been obtained in from four to seven seconds. The average time for those who make radiographs is from two to three minutes for the hand; thicker parts of the body, the elbow or arm, require from ten to fifteen minutes.

In the use of the Crookes' tube, one has to study the color of the rays that are produced inside the tube. When it has been working for some time, the kathode rays will be greenish-yellow, and these are best for observation with the fluoroscope, but when the rays are of an apple-green color, they give the best photographic effect. The development of a plate made especially for this purpose should be continued from six to twenty minutes, because the film, being of double thickness, requires a longer time for the developer to penetrate. On developing such plates, rarely will any image be visible on the back even after ten minutes in the developer. Mr. Carbutt has placed two of them together and the upper one yielded a fine negative and the lower had a mere gost of an image. In experimenting on the penetration of celluloid films, Mr. Carbutt has put eight films together and they have yielded six very good negatives, showing that glass is a greater preventative of the rays passing trough. He has under way now experiments with an entirely different sort of soluble haloid, with the hope that a silver haloid can be obtained which will be more sensitive to the X-rays.

Comparing the action of the rays on a plate to that of daylight through the lens, he found that the longer the plate is exposed to the rays, the more dense the result on the margin, which is just the reverse of what takes place

with daylight; as, if an over-exposure in the camera takes place, only a thin flat image results, and the exposure may be continued so that a reversal of the image is secured; but with the X-rays, the longer the exposure, the greater the density, the silver haloid being so acted on where the rays have had full action as to give a thicker, heavier deposit so opaque that light cannot pass through it. A radiograph of a rat was exposed fifteen minutes, yet the margin of the background is so dense that it remains white when the image is fully printed, and that without intensification of the negative.

Dr. Max J. Stern said that in making skiagraphs of the thorax, he placed the tube at as great a distance as thirty inches. He has found that the greater this distance, the more effective the result and the better the picture. The bad result in the case of burn reported, was brought about by having the tube very closely applied, but this was an exceptional case. In making skiagraphs in in cases of metatarsalgia, the plate was placed under the sole of the foot, as the erect posture is that in which most pain is felt in this affection. In reproducing hand or foot, it matters little whether the plate is above or below, because the distacne to be traveled is so small.

Dr. Stern suggested the possibility of making a plate that could be used immediately in emergency cases when one desires to use a plate once. He referred to a plate fashioned after the old ferrotype plate, and expressed the hope that in a short time a print will be available that can be used within two or three hours of the taking of the picture.

LIBRARY TABLE.

The American Text-Book of Physiology. By Henry Bowditch, M.D., John G. Curtis, M.D., Henry H. Donaldson, Ph. D., W. H. Howell, Ph.D., M.D., Frederic S. Lee, Ph.D., Warren P. Lombard, M.D., Graham Lusk, Ph.D., W. T. Porter, M.D., Edward T. Reichert, M.D., and Henry Sewall, Ph.D., M.D. Edited by William H. Howell, Ph.D., M.D., Professor of Physiology in the Johns Hopkins University, Baltimore, Md. Philadelphia, W. B. Saunders. Cloth, royal octavo, pp. 1052. By subscription $7.00.

That the American series of text-books issued in so handsome a form from the press of W. B. Saunders contains much of great value to both student and practitioner, is a fact patent to the most casual observer. No effort has been spared to make them up to the times in every respect, and each volume shows evidence of careful planning. The names appended as authors and collaborators and editors are in every instance of the highest standing, and the purchaser selecting any particular volume will not miss securing a valuable contribution to current medical literature. Heretofore works on physiology have been invariably the production of a single author, and the experiment of combining the work of different writers is a somewhat hazardous one, although doubtless possessing advantages. One of the most important of the advantages claimed for the method is that the student gains thereby the point of view of a number of different teachers. This would be true were the volume a composite production, but the style shows that it is instead a mosaic, each author treating merely of some special department of the science. How this plan can give different views of the subject, we are at a loss to understand since each author necessarily treats his subject from his own point of view, subject only to the revision of the general editor. The plan has the advantage of enabling publishers to place upon the market a work containing all the latest discoveries in any particular branch, since the work being divided among so many, less time is taken in the production of the whole. The volume under consideration has its greatest field of usefulness probably to the special student. The chapters on Chemistry of Digestion and Nutrition, Respiration, Animal Heat, and the Chemistry of the Animal Body, are particularly fine, and in themselves are complete expositions of modern knowledge in these departments. In many respects this is the finest and most helpful volume of the entire series thus far issued.

Miskel, a novel, by L. M. Phillips, M.D. Cloth, pp. 266, price 50 cents. New York, Baily & Fairchild Company.

One of the chief things claimed for this novel is that it covers so much ground and introduces the reader to so many different phases of humanity. It begins in the end, then goes back halfway to the beginning, then strikes the beginning, and finally completes the circle by again returning to the opening

scene. Had the volume been put from the press before Wilkie Collins published "The Moonstone," one might have been led to think that the latter had been suggested by certain parts of "Miskel." Hypnotism, black art, gold cure, murder, theft, all lend their aid to form blood-curdling situations, all revolving around a kidnapped girl, whose confiding nature leads her to adopt almost all the other characters mentioned as either father or mother.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS, AND PHARMACOLOGY. By George Frank Butler, Ph.G., M.D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Chicago; Professor of Materia and Therapeutics, Northwestern University, Woman's Medical School; Attending Physician to Cook County Hospital; Member of the American Medical Association, Illinois State Medical Society, Chicago Medical Society, Chicago Pathological Society, and Fellow of the Chicago Academy of Medicine, etc., etc. W. B. Saunders. Cloth, pp. 858, $4.00 net: sheep or half morocco, $5.00 net.

It is a difficult matter to present materia medica in a manner attractive to the average student in that so much of it must lie in a line of direct memorizing of technical matters associated with too little of a nature to awaken interest in the inquiring mind. The practicing physician of course would use his volume of materia medica solely as a book of reference, but to the student it is an indispensable adjunct to lectures and to him much depends upon its arrangement and treatment. This difficulty has always been recognized by writers and much thought has been expended upon the best plan for a work of this nature. It is conceded that materia medica, pharmacology and therapeutics are best treated in combination. The physiological action of a drug and other knowledge gained through experimental science in connection with the modes of preparing and administering it is far more attractive to the mind than the mere bald details of the appearance and origin of the drug. Professor Butler has based his volume upon the United States Pharmacopeia and United States Dispensatory, and it must be conceded that from the point of view of arrangement and treatment the work is better calculated to beget an intellectual and comprehensive understanding of this branch of medical science than the average work on the market. The writer has embodied in his treatment of the theme the deductions derived from his experience as a practitioner and instructor. The point of particular interest and one that is treated at remarkable length and great clearness, is that of the physiological action of drugs. The illustrations under each general class though diagrammatic are clear, conducing to a ready comprehension of the mode of action upon and through the various centers. It is perhaps unfortunate that the author has consulted the National instead of the United States Dispensatory since the latter is the acknowledged authority, even though the general arrangement of the National Dispensatory is the far more convenient of the two.

ESSENTIALS OF PHYSICAL DIAGNOSIS OF THE THORAX. Arthur M. Corwin, A.M., M.D., Demonstrator of Physical Diagnosis in Rush Medical College; Attending Physician to the Central Free Dispensary. Second edition, revised and enlarged. Cloth, pp. 199. Price, $1.25 net. Philadelphia, W. B. Saunders.

This little volume first appeared under the title "Outline of Physical Diagnosis of the Thorax," and attained an immediate and wide popularity. The information is given in very concise and practical form, in almost tabular form, and the volume likely to be of service to the student, though as a rule the use of compends is to be deprecated as inculcating merely superficial methods.

DEFORMITIES, A TREATISE ON ORTHOPEDIC SURGERY, intended for practitioners and advanced students, by A. H. Tubby. M.S., Lond., F.R.C.S. Eng. Assistant Surgeon to and in charge of the orthopedic department Westminster Hospital; Surgeon to the National Orthopedic Hospital; Joint Honorary Secretary British Orthopedic Society, etc. Illustrated. London and New York. The Macmillan Company. Cloth, pp. 598, price $5.50.

There are no finer publishers in the country than the Macmillan Company, and the present volume is in respect of style and press work a gem. It is illustrated with 15 plates and 302 figures, of which 200 are original, taken especially for this work. Notes of over 100 cases are given very fully. As the author states in his preface, orthopedic surgery in England does not include all phases of diseases of the bones and joints, such as tubercular ascitis and arthritis, nor many congenital deformities, as cleft palate and hare lip;

but all that is touched upon is treated in the most masterly way. The volume is divided into the deformities of the spine, of the neck, chest and upper extremities, of rhachitis and the resulting deformities, deformities of the lower extremities, and ankylosis, congenital displacements, deformities resulting from cerebral and spinal paralyses, arthrodesis. Professor Tubby is master of his subject, is a clear and lucid writer, and has succeeded in formulating a reliable guide to medical men in the treatment of this difficult class of diseases. Perhaps a little more space could have been given to the consideration of reparative exercise in movements of the spine in such diseases as scoliosis, but that is an invidious criticism when so much that is of greater value has been so thoroughly expounded.

ROYAL INFIRMARY CLINIQUES. Alexander James, MD., F.R.C.P.E., Physician to the Royal Infirmary, Edinburg. Cloth, pp. 167. Edinburg, Oliver & Boyd. Price 5s.

Although clinical lectures in the United Kingdom are generally published in the various journals, it is far preferable to the student to have them in book form, as a matter of ready reference, and the fact that they can be so obtained frees him from the necessity, so irksome and disadvantageous, of taking notes, thus often missing the real point of the lecture. The volume of cliniques issued by Dr. James is excellent of its kind, and has been placed at a price easily within the reach of all. The plan should be adopted by other lecturers. Some of the lectures are very interesting, particularly that upon the two somewhat rare cases of liver cirrhosis in children.

OPHTHALMIC OPERATIONS AS PRACTICED ON ANIMALS' EYES. Clarence A. Veasey, A.M., M.D., Adjunct Professor of Diseases of the Eye, Philadelphia Polyclinic. Cloth, pp. 99, price $1.00. Philadelphia, The Edwards & Docker Company.

Apparently this is the first time the matter embodied in this little volume has ever appeared in print, the information having been hitherto only obtainable through an operative course or personal instruction. The various methods are described and the technic illustrated, many of the cuts being specially prepared for this work. There are a few instances of careless proof-reading, such as the miss-spelling of words like "seize," and some of the drawings are a little out of proportion. These, however, are minor faults, and do not interfere with the general usefulness of the work.

THE COMEDY OF SENTIMENT. Dr. Max Nordau. Cloth, 12mo, pp. 278. Price $1.50. Chicago, F. Tennyson Neely.

It is a highly improbable thing that a woman who made a practice of using the methods of a common courtesan to obtain a husband, should have been enabled to pursue her course so long as Frau Ehrwein without a more general suspicion of her chastity having been aroused. Possibly the reason for the lack of discovery is implied by showing her as thrown very little in the society of women, and men are proverbially fatuous where they are flattered. The unusualness of the character has, as it has been paradoxically expressed, "the attraction of repulsion." The means employed throughout this hunt for a husband, were those of flattery of the grossest and most physical type, and it seems an incongruity to attempt to reconcile in the same man the noble qualities that we are told Bruchstadt possessed, with the quite touching and implicit faith in his own irresistibility with women. Excessive vanity sometimes is an attribute of what is dubbed genius, but seldom goes with an otherwise well-balanced character, as we are told that Bruchstadt's was.

RECHERCHES CLINIQUES & THÉRAPEUTIQUES SUR L'EPILEPSIE, L'HYSTÉRIE ET L'IDIOTIE. Compte rendu du service des enfants idiots, épileptiques et atriéres de Bicêtre pour l'annee 1895; Par Bourneville Medicin de Bicêtre. Avec la collaboration de MM. Boncourt, Comte, Dardel, Dubarry, Leriche, Lombard, J. Noir, Pilliet, Ruel, Sollier et Tissier, internes ou anciens internes du service. Volume XVI, 80, LXXI, 254 pages, avec 31 figures et 8 planches hors texte. Paris, Aux Bureau du Progres Medical, 1896.

The contents of this interesting volume, which may be reviewed as a type of the work which has largely helped in giving France a foremost place in the literature of neurologic science, are divided into three parts. The first deals with general details relating to management, education, amusement, classification, statistics, etc.; the second with clinical and anatomico-pathologic matters; and the third with therapeutic questions. Among the subjects considered in the second part may be mentioned idiocy and epilepsy, dependent upon meningitis and encephalitis, idio-

pathic epilepsy and idiocy, congenital idiocy, and hypertrophic cerebral sclerosis complicated by meningitis. The therapeutic division of the work includes a report of three cases of unpredematous idiocy, subjected to thyroid therapy; a study of the action exercised by the thyroid gland upon growth and upon obesity; the report of a case of pronounced imbecility, probably congenital with muscular spasm and coprolalia, treated medico-pedagogically; and a consideration of the therapeutic employment of monobromated camphor. The text is amplified by means of a number of charts, cuts and plates.

THE RIGHT TO LOVE. Dr. Max Nordau. Cloth, pp. 169, 12mo. Price $1.50. Chicago, F. Tennyson Neely.

Possibly the best thing in this entire volume is the naive preface, a gem in its way. Beyond this point there is nothing new, only the old story of a weak woman mistaking satiety for a loss of love, and suffering herself to be led, through curiosity and vanity, into the toils of the typical lady-killer, who considers the married woman a safer prey than the ingenue. There is nothing new or especially attractive in the play, and there is not enough "go" to it to promise much for the stage, yet for this class of literature it is good reading. One is tempted to inquire, however, just the origin of the apparently low estimate Dr. Nordau has of women.

ELEMENTARY PHYSIOLOGY FOR STUDENTS. By Alfred T. Schofield, M.D., M.R.C.S., &c., Philadelphia, Lea Brothers & Co., 372 pages, two colored plates, 227 figures and diagrams. Price, net, $2, in cloth.

Chapter I, on the phenomena of life, discusses briefly the relation of physiology to biology, etc.; the fallacy of spontaneous generation; growth, development, decay and death as characteristics of organic as opposed to inorganic bodies, life and especially the different powers of animals and vegetables to extract nutriment from surrounding objects. The student's attention is then called, in an interesting manner, to the exterior and interior of the human body and the use and adaptation of various structures is explained so as not only to impart specific information, but to train the observation. The shape of the face as adapted to an upright position and not the prone attitude of quadrupeds, the looseness of the shoulder joint and the relative fixity of the joints of the leg, the development of the mouth as an articulating cavity rather than for chewing large masses of food, the arch of the foot and the mechanical advantage of the curves of the spine—these are some of the points which tend to arouse the student's interest and teach him to gather hints from appearances which the untrained mind would pass unnoticed.

The properties of the cell, the histological and chemical make-up of the body are concisely presented. The general arrangement of the rest of the book does not vary materially from that necessarily adopted by other physiologists. Perhaps because it is one of our own hobbies, we note with pleasure the little chapter headed "Two-fold Course of Food," and which emphasizes by its arrangement rather than because it supplies information omitted by other authors, the difference between the absorption of proteids, carbohydrates, salts and water, on the one hand, and of the fats on the other. A little memonic device is as follows: "The liver has five letters, five lobes, five ligaments, five fissures, five functions, five vessels and weighs fifty ounces."

The two colored plates are of various structures, uniformly magnified to 80 and 240 diameters, respectively. The best combination of eye-piece and objective for viewing the sections represented, is given in a foot-note, for English, Zeiss and Hartnack instruments.

The figure representing the abdominal organs in situ, is certainly wrong in locating the transverse colon two or three inches above the umbilicus and the stomach as descending no lower than the costal arch. We notice, also a misplacement of the words vein and artery, in diagram 83 of the double circulation of the blood. It is extremely unfortunate that metric units, now almost universally used in text-books that discuss scientific and especially chemical subjects, should have been ignored. For clinical as well as scientific purposes, the student must learn data as to excretion, etc., in grams and cubic centimeters and, while it is well enough to use also the older units, the translation should be made in the text.

The book is of convenient size and, it is scarcely necessary to say that the publishers have done their work well. In scope, it is adapted to an advanced academic course, one at a literary college or it may be used by

medical and dental classes, though not containing the amount of detail theoretically insisted upon by medical schools of the highest rank. However, it would certainly be an excellent manual for the junior student and would, doubtless, serve to carry a senior through any examination to which he would be subjected by his faculty or by a state board. On general principles, we believe it is better for a student to learn the essentials of a subject like physiology well, than to be instructed in so many details that he forgets most of what he has once learned.

KIRKE'S PHYSIOLOGY, by Baker, and Harris of England, with an American revision of the chapters on the nervous system by Charles L. Dana. New York: William Wood & Co., 1896; 847 pages; 500 illustrations; price $3.40 net.

The first chapters of this work consist of a treatise on the cell and its nucleus, including the subject of karyokinesis. Eighty pages, copiously illustrated and with many colored plates are devoted to histology. A brief chapter and an appendix afford a summary of physiological chemistry. The remainder of the book is arranged in the usual way. The descriptions are full without being verbose and are liberally interspersed with illustrations of organs, apparatus, tracings of pulse, respiration, excretion-curves, etc. The sections on urine and blood contain many valuable hints for clinical examinations. Diagrams are used to supplement actual representations of organs and apparatus whenever the student's conception of a function can better be appealed to, through the imagination. The publishers point with natural and fully justified pride to the chapters on the nervous system as being unusually advanced and thorough. Quantitative statements are made in decimals, throughout the work. We note that some popular errors are perpetuated in the section on voice. Thus, it is said, "The sound of the vowels, even when mute, has its source in the glottis," and we are told that the vowel-sounds in *can* and *dog* cannot be prolonged. A very obvious mistake, even if the word *dog* is correctly pronounced as it rarely is. The writer of the section is evidently misled, both by our faulty alphabet and by the expressions "long" and "short" as applied to vowels.

The publishers are to be complimented on having eliminated certain Anglicisms which are quite apt to annoy the American reader of an English book. We are happily disappointed in not finding *whilst*—which is quite as bad as what is pronounced *wunst*—or the *our* in such words as *labor*, or *shew* instead of *show*, all of which insular peculiarities have been allowed to remain in some excellent text-books offered to the American profession. We take pleasure in recommending this work, not only to undergraduates but to physicians who wish to keep abreast of modern discoveries in that science which ought to underlie the arts of diagnosis and therapeutics.

VEST POCKET MEDICAL DICTIONARY, by Albert H. Buck, M.D. New York: William Wood & Co.; 1896; 527 pages; price 85 cents, net.

The names of drugs and many special anatomical terms are excluded so as to bring within small compass, the terms which one is likely to meet in medical literature. The book is clearly printed and is as complete as possible, considering its intention. Pronunciation is not given, except when reasonable doubt as to accent, etc., might exist and not even then, in the case of proper names. The binding is of flexible brown leather and the general appearance is neat while modern terminology seems to have been fully embraced.

"The food of the Anglo-Saxons," by Dora M. Morrell, is the title of the leading article in the November issue of *Table Talk*. Miss Cornelia C. Bedford gives an exhaustive and valuable article on "Bread;" Miss E. Marguerite Lindley on "Dress and Its Effect upon Health and Mind." Mrs. Burton Kingsland tells of "Hospitality in Germany," and Mrs. M. C. Myer describes the "Chinese Woman of High Caste," and her home life.

CANCER OF THE UTERUS—

℞

Sodium chlorate	2 parts.
Distilled water	10 "
Syrup of orange flowers	3 "

M. At first two "spoonfuls" (whether teaspoonfuls or tablespoonfuls is not stated) are to be taken in twenty-four hours, and the daily amount is to be increased gradually to eight "spoonfuls."

The following powder is applied on intracervical tampons:

℞

Sodium chlorate, Bismuth subnitrate, } of each . .	2 parts.
Iodoform	1 part.

M.—*Boucher of Ronen.*

PERISCOPE.

NEWS AND MISCELLANY.

In regard to mixed clinical classes, the announcement that Mr. Jonathan Hutchinson has been compelled to exclude ladies from his popular clinical afternoons on account of the unwillingness of male patients to undress before them is full of significance. It may be taken as evidence that the British male out-patient is not yet acclimatized to the presence of medical students of the other sex and his feelings have to be reckoned with, especially in a private clinic, at which his attendance is purely an act of grace. Why the modesty of the British working man should be so much more susceptible than that of his wife or sister, it is difficult to conceive, but he has yet to learn that science is asexual and regards the malady and not the man. It is greatly to be regretted that this course should have been deemed necessary, for it places yet another obstacle in the way of the acquisition of clinical knowledge by women, Doubtless, in the near future, the public will become as accustomed to women as clinical observers as to women cyclists, and will abandon foolish protests against the one as they have ceased to objurgate the other. There is no valid reason, however, why some prominent medical woman should not forthwith inaugurate a clinic of her own at which female patients will object to undressing before men. That would be the *reductio ad absurdum.—Medical News and Circular.*

Pruritus vulvæ must be vastly more frequent in the United States than in the Eastern hemisphere, says the *Medical Press and Circular*, judging from the fact that one hardly ever glances through an American medical journal without coming across the most harrowing accounts of its severity and refractoriness to treatment, along with a series of formulæ destined to relieve or cure, according to the temperament of the writer. It might be inferred from the unceasing activity of obscure therapeutists in this direction that none of the remedies hitherto recommended have attained the object in view. We are not in possession of sufficiently trustworthy data to enable us to discuss the etiology of this affection as it affects American women, but it would be interesting, as well as instructive, to know, on good authority, whether the men of that hemisphere experience, *mutatis mutandis*, any analogous morbid symptoms. Everyday gynæcological practice over here does not reveal pruritus vulvæ as a common or intractable affection, so that an explanation of its greater incidence on the other side of the Atlantic must be sought in ethnological or climatological peculiarities, unless, indeed, there are more individual reasons associated with the prevalence of a highly-strung, quasi-neurotic temperament. Perhaps some of our trans-Atlantic *confreres* will throw a little light on this subject.

When the breath becomes ammoniacal during the progress of any disease, of the urinary apparatus it is a tolerably sure warning that uremic poisoning and grave complications are at hand.—*N. Y. Medical Journal.*

In Albuminuria the hot-air bath fills two indications(Carrieu in *Med. et Chir.*)it relieves the kidney by the abundant sweating produced, and it regulates the organic interchanges. The immediate physiological effects of this treatment are shown by a sensation of heat, which is not at all disagreeable, and an abundant sweating accompanied by acceleration of pulse and elevation of temperature. Respiration is not at all affected. No untoward symptom is induced except, during the first baths, some palpitation and headache, which last about an hour; sweating is the only symptom that persists for a length of time.

The therapeutic effects are manifested by changes in the urine, the quantity of which diminishes on the day after the bath, and a rather intense polyuria which supervenes on the following day: the density of urine is in inverse proportion to its quantity. The urea scarcely undergoes any modification. The rate of albumen greatly diminishes on the day after the bath, but is increased on the following days, although it does not return to its former quantity. Gradually, however, this diminution becomes persistent, and finally there is complete disappearance of the albuminuria.

Hot-air baths are indicated in cases of subacute and chronic nephritis in epithelial forms, but are contra-indicated in the vasculo-connective forms and when arterio-sclerosis, a skin disease or a nervous condition exists.—*Medical Age.*

The symptoms of cerebral syphilis are, according to Dr. George J. Preston, in the *Journal of the American Medical Association*, very varied and the history of the primary lesion is often uncertain. Moreover, the interval between the primary lesion and the brain trouble may be so long as to make the connection between the two uncertain. Meningitis from syphilis is nearly always chronic, the symptoms coming on gradually, the first one being headache, then there may be paralysis of the third pair of nerves, or the fourth or sixth, then there may be hemianopsia. The most common form is great mental depression, or rather apathy. We should make our diagnosis and then treat vigorously. This method of treatment is much more used in this

country than in Europe, hence the better results obtained here. He has given as much as 300 to 500 grains of iodid of potash a day, and we are justified in doing this. He thinks that mercury very materially helps the iodid. Dr. E. N. Brush thinks that the interval between primary lesion and the brain troubles is much longer than Dr. Preston intimated. In one case he has given 900 grains of iodid of potash a day. He does not believe in the therapeutic test and does not think that because a patient can take large doses of the iodid that it should be treated as specific; some syphilitics can not take large doses while those who have never had the disease can often stand very large doses.

The following subscriptions to the Rush Monument Fund have been received:

1896. DATE.	FROM.	AMOUNT.
April 17,	Dr. J. W. Hoff, Pomeroy, O.	$ 5.00
" " "	T. J. Acker, Croton-on-Hudson, N. Y.	5.00
" 30,	Peoria City Med. Soc. (through Dr. O. B. Will), Peoria, Ill.	25.00
" "	Dr. D. W. Cathell, Baltimore, Md.	1.00
" 2,	" W. T. Cathell, Baltimore, Md.	1.00
May 9,	" J. P. Getter and others Mifflin Co., Pa.	3.00
" 21,	" E. H. Bishop, Towson, Md.	1.00
June 10,	" C. B. Burr, Flint, Mich.	10.00
" 29	" W. H. Hardin, Anderson C. H., S. C.	1.00
" "	Herkimer Co. Med. Soc. (through Dr. G. Graves, Herkimer, N. Y.	25.00
Sept. 30,	Dr. J. W. Grosvenor, Buffalo, N. Y.	1.00
" "	Interest to date	81.00
		159.00
	Before Reported	3727.39
		$3886.39

GEORGE H. ROHÉ,
Secretary.

The risk of inducing habituation from the use of morphine in the insomnia or neurasthenic persons has led to its being discarded in the treatment of this class of cases, unless indicated by the presence of severe pains. Besides the necessity of resorting to the opiates no longer exists at the present day, in view of the large number of hypnotics in materia medica. Among these many authorities in this country and Europe regard sulfonal as ideal. The sleep produced closely approaches the normal, being calm, restful and refreshing, and if the remedy has been properly administered in an abundance of some hot fluid, as water, tea, milk, etc., it is free from after-effects. In a paper recently read before the Ontario Medical Association, Dr. E. E. Harvey, (*Amer. Med. Surg. Bulletin*, September 19, 1896,) stated that in the administration of hypnotics he had the best effects from sulfonal. This was especially true in those cases where hysteria had supervened on the neurasthenia. The powder—a dose of from ten grains to twenty-five grains—being given according to the severity of the case, should first be dissolved in hot water, the solution being then poured into half a cupful of hot milk, and then administered.

The twentieth anniversary of the publication of the *Journal of Inebriety*, and the twenty-sixth year of the Association for the Study and Cure of Inebriety, was celebrated by a memorial meeting at the New York Academy of Medicine, November 20th. The following addresses and papers were presented: "A historical review of the first meeting of the association, and its papers and discussions," Lewis D. Mason, M.D., Brooklyn, N. Y.; "*The Journal of Inebriety*, its organization and growth, the early and later literature," T. D. Crothers, M.D., Hartford, Conn.; "The first asylum for the cure of inebriates and its founder," Charles H. Shepard, M.D., Brooklyn, N. Y.; "The first State asylum for pauper inebriates and its work," M. E. Hutchinson, M.D., Fopboro, Mass.; "The first efforts to treat opium cases in asylums," J. B. Mattison, M.D., Brooklyn, N. Y.; "The first home for the transient case of inebriates," V. A. Ellsworth, M.D., Boston, Mass.; "Empiric and charlatan efforts to cure inebriates for the past quarter of a century," N. Roe Bradner, M.D., Philadelphia, Pa.; "The history and influence of alcohol in medicine in modern times," I. N. Quimby, M.D., Jersey City, N. J.; "The origin and growth of asylums for inebriates in Great Britain," Norman Kerr, M.D., London, Eng.

LOCAL TREATMENT OF BALDNESS—

℞

Tinct. cantharidis	4 fl. drs.
Tinct. capsici	1 fl. oz.
Ol. ricini	½ fl. dr. to 1 fl. dr.
Alcoholis, q.s. ad	4 fl. ozs.

M. Sig.—Rub thoroughly into the scalp.—*Pharmaceutical Era.*

INSECTS' STINGS AND BITES—

℞

Acetic Ether	5 parts.
Eucalyptol	10 parts.
Eau de Cologne	10 parts.
Tincture of Pyrethrum	50 parts.

M. Dilute with four or five times its bulk of water and apply as a lotion.—*Practitioner.*